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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,119	10/30/2000	Gunter Halmschlager	P19790	3782

7055 7590 01/25/2007
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RESTON, VA 20191

EXAMINER

FORTUNA, JOSE A

ART UNIT	PAPER NUMBER
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1731

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/25/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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pto@gbpatent.com

Office Action Summary	Application No. 09/646,119	Applicant(s) HALMSCHLAGER ET AL.	
	Examiner José A. Fortuna	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-97 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-97 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

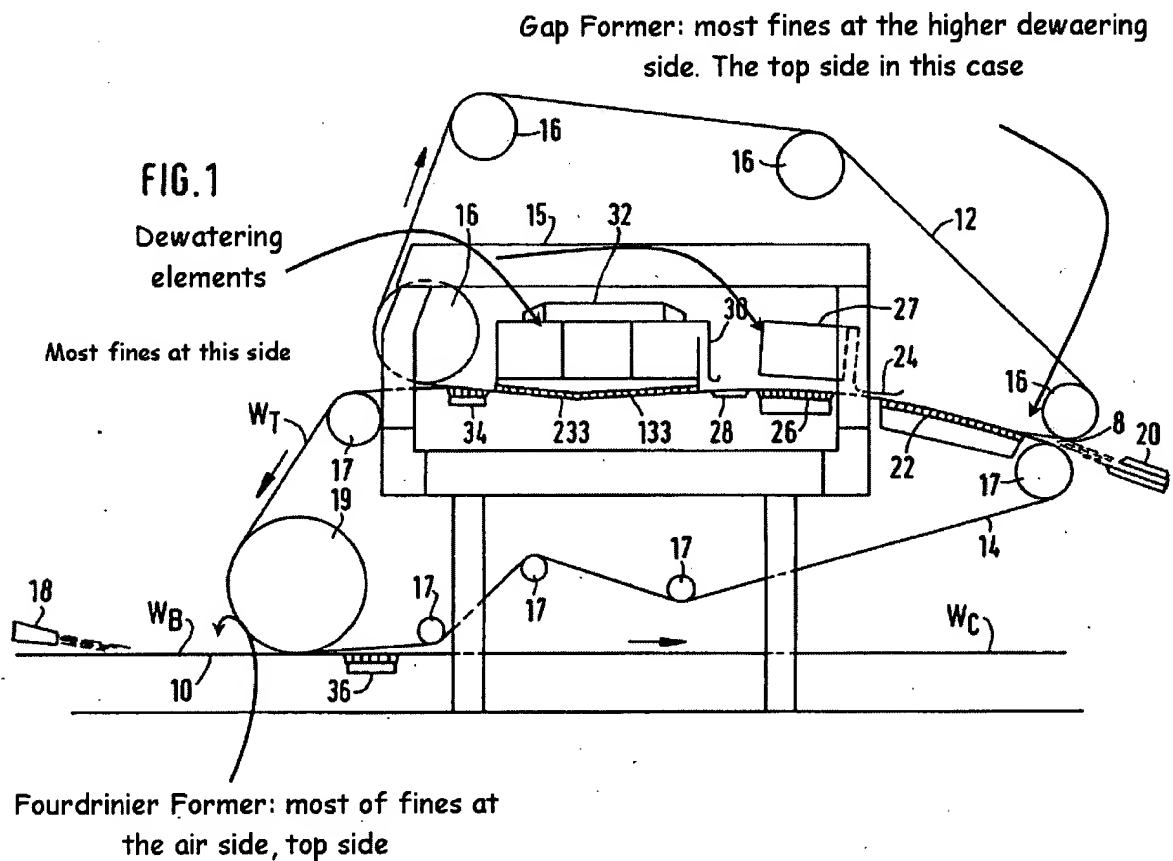
2. Claims 46, 47 and 74 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Turner et al., US Patent No. 4,830,709

Regarding Claims 46-47 and 74, Turner et al teach a device for making a multi-ply paper in which the different plies are made in separated headboxes, couched, and joined see figures. Turner et al. teach the making of cardboard and teach the advantage of joining the plies using the surface having fines on the surface, see column 2, lines 12-18. Also Turner et al. teach the use of a Multilayer headbox along with other types of headboxes in the multi-ply board, see figure 3 and column 6, lines 39-52 and teach in the same paragraph the formation of thin layer, i.e., a paper layer, and other layer being a board, paperboard, (for claims 46 and 76). Regarding claim 74, Turner et al shows in the figures the use of pressure elements in the outside of the felts/fabrics, see elements 22, 22a etc. Since the device of Tuner et al. shows all the elements of the claimed device and since the dewatering start at the bottom and then a the top, then most of the fines would be top¹, see figure below, and it is well known that Fourdrinier formers have greater concentration of fines at the air side, see for example page 1, lines 11-16 of the present

¹ This is well known and taught by applicants on page 1, lines 16 of the original specification, "In so-called gap formers the dewatering occurs first at the top and then at the bottom, which results in higher content of fines at the bottom," same applies to Turner et al. the dewatering first occurs at the bottom and then at the top, which concentrate the fines at the top.

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application, then Tuner et al. are joining the plies with higher fines content and therefore, the limitations of the claims are met, or at least the minor modification(s) to obtain the claimed invention would have been obvious to one of ordinary skill in the art. Moreover, Turner et al. clearly teach that better bonding is obtained if the plies with higher fines content are joined, see column 1, lines 37-46 and therefore, the joining of the plies with higher content of fines would have been obvious to one of ordinary skill in the art.



Turner et al. disclose gap formers. Note that as defined by the "Handbook for Pulp & Paper Technologist," by Gary A. Smook second edition, a gap former is a twin wire machine having blade in the surfaces of the wires, (Blade Former), or roll(s) for the

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dewatering of the web, (Roll Former). As Turner shows the use of twin wires, having blades on the surface of the wires, and combination of twin wire(s) of such wires and Fourdrinier machines, this limitation is met.

The Systems shown by the reference seems to have all the structural limitations as claimed since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Also, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claim Rejections - 35 U.S.C. 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 48-97 are rejected under 35 U.S.C. §103(a) as being unpatentable over Turner et al., further evidenced by US patent Nos., 3,378,435, 5,607,551, 5,238,534 and GB 2 283 766.

Regarding claims 75-80 and 89-97, Turner et al. clearly teach that better bonding is obtained if the plies with higher fines content are joined, see column 1, lines 37-46 and therefore, the joining of the plies with higher content of fines would have been obvious to one of ordinary skill in the art for the same benefit.

Turner et al are silent with respect to the specific of the circulating of a dewatering belt over a former element, claims 48²; including a headbox, claim 49; forming element being a roll, claims 50; two gap formers; claims 51; web traveling in different direction, claims 52. Regarding Claims 48-50 these claims define what is well known in the art, as a "Crescent Former," defined in US patent No., 3,3378,435 a more recently used in US Patent Nos. 5,607,551, 5,238,534, GB

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2 283 766, DE 19704443 A1, etc. Note that the crescent former is a gap former, twin wire, see Smook, previously cited, having a forming element, a roll, in which a moving felt and a fabric wrap the roll, the felt run next to the roll and the fabric runs on the outside forcing the stock to drain through the fabric. Crescent formers are functionally equivalent to twin wires/gap formers and its use would have been obvious to one of ordinary skill in the art since he/she would have reasonable expectation of success if a crescent former is used instead of a functional equivalent twin wire. Note also that it has been held that “[W]here two equivalents are interchangeable for their desired function, substitution would have been obvious and thus, express suggestion of desirability of the substitution of one for the other is unnecessary.” *In re Fout* 675 F. 2d 297, 213 USPQ 532 (CCPA 1982); *In re Siebentritt*, 372 F.2d 566, 152 USPQ 618 (CCPA 1967).

Regarding Claims 51, 52, and 71, Turner et al teach the use of two gap formers and show in all the figures the formed web traveling in opposite directions before entering the couching zone. Claims 62-70, Turner et al. teach the use of several headboxes, including Fourdrinier formers and the different ways in which the layers having more fines can be joined. Turner et al teach the combination of gap formers and Fourdrinier, see figures and also teach that more than two plies can be made. Therefore, using more than one Fourdrinier or combinations of Fourdrinier and gap formers and the different manners in which the formers can and/or need to be placed in order to join the surfaces with more fines is with the levels of ordinary skill in the art in view of Turner et al teaching. Note that Turner et al teach the moving wire moving horizontally in the couching zone of claims 65 and 69, see figures. As to claim 72, Turner et al. teach only the use of single layer headbox; however the use of a multilayered headbox, which is

² Even though only the apparatus claims are shown/cited, the same reasoning applies for the equivalent method

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a non-critical aspect of the invention, is within the levels of ordinary skill in the art since its use, i.e. the use of a multilayered headboxes, is conventional in the art, see cited references.

As to claims 53-61 and 81-88, Turner et al. do not show the use of several gap formers, but the use of Fourdrinier and a Gap Former, see figures. However, using a combination of Gap formers with or without Fourdrinier is within the levels of ordinary skill in the art. In other words, replacing the Fourdrinier of Turner et al. with a gap/Twin wire former would have been obvious to one of ordinary skill in the art since it has been held that “[W]here two equivalents are interchangeable for their desired function, substitution would have been obvious and thus, express suggestion of desirability of the substitution of one for the other is unnecessary.” In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 152 USPQ 618 (CCPA 1967).

Response to Arguments

6. Applicant's arguments with respect to claims 46-97 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of “Method and apparatus for forming a multi-ply web.”


Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

claims.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


José A Fortuna
Primary Examiner
Art Unit 1731

JAF